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# Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

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## Application No. Applicant(s) 10/574 267 PRASAD, YANDAPALLI DURGA Office Action Summary Examiner Art Unit Lucas Stelling 1797 -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --Period for Reply A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS. WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION. Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication. If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b). Status 1) Responsive to communication(s) filed on 05 May 2010. 2a) This action is FINAL. 2b) This action is non-final. 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11, 453 O.G. 213. Disposition of Claims 4) Claim(s) 1.60-67.69-71.78.79.81 and 83-92 is/are pending in the application. 4a) Of the above claim(s) 60-67.79.81 and 83-90 is/are withdrawn from consideration. 5) Claim(s) \_\_ is/are allowed. 6) Claim(s) 1,69-71,78,91 and 92 is/are rejected. 7) Claim(s) \_\_\_\_\_ is/are objected to. 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement. Application Papers 9) The specification is objected to by the Examiner. 10) The drawing(s) filed on is/are; a) accepted or b) objected to by the Examiner. Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a). Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d). 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152. Priority under 35 U.S.C. § 119 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f). a) All b) Some \* c) None of: Certified copies of the priority documents have been received. 2. Certified copies of the priority documents have been received in Application No. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)). \* See the attached detailed Office action for a list of the certified copies not received.

U.S. Patent and Trademark Office PTOL-326 (Rev. 08-06)

1) Notice of References Cited (PTO-892)

Paper No(s)/Mail Date

Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) Information Disclosure Statement(s) (PTO/SB/08)

Attachment(s)

Interview Summary (PTO-413)
 Paper No(s)/Mail Date.

6) Other:

5) Notice of Informal Patent Application

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## **DETAILED ACTION**

#### Election/Restrictions

- Newly submitted claims 83-90 are directed to inventions that is independent or distinct from the invention originally claimed for the following reasons:
- 2. Restriction is required under 35 U.S.C. 121 and 372.

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1.

In accordance with 37 CFR 1.499, applicant is required, in reply to this action, to elect a single invention to which the claims must be restricted.

Group 1, claim(s) 1, 69-71, 78, drawn to a first method of controlling microbes.

Group 2, claim(s) 83-86, drawn to transition metal silicate compositions.

Group 3, claim(s) 87-90, drawn to drawn to additional methods of controlling microbes.

3. The groups of inventions listed as Groups 1 and 2 above do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons: The common technical feature between groups 1 and 2 is the use of copper silicate having a silica to copper ratio in the range of 1:0.34 to 1:5.15. Beschke teaches a copper silicate having a silica to copper ratio in this range. See Beschke col. 3 line 70 -- col. 4 line 5.

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5. The groups of inventions listed as Groups 1 and 3 above do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons: The common technical feature between groups 1 and 2 is the use of copper silicate having a silica to copper ratio in the range of 1:0.34 to 1:5.15. Beschke teaches a copper silicate having a silica to copper ratio in this range. See Beschke col. 3 line 70 – col. 4 line 5.

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Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 83-90 have been withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03. New claims 91 and 92 are deemed to share sufficient common technical features with claims of the originally presented group 1 that they will be examined on the merits.

#### Claim Rejections - 35 USC § 112

- The following is a quotation of the second paragraph of 35 U.S.C. 112:
   The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
- 7. Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. It is not clear how the cupric silicate can simultaneously have a silica to copper ratio of 1:5.15, 1:0.78, 1:0.53, and 1:0.34. For purposes of examination the amended portion of claim 1, will be treated as a "Markush-type" claim limitation. See MPEP 2173.05(h) for a discussion of Markush group claiming.
- Claims 1, and 91 are rejected under 35 U.S.C. 112, second paragraph, as being
  indefinite for failing to particularly point out and distinctly claim the subject matter which
  applicant regards as the invention.
- 9. A broad range or limitation together with a narrow range or limitation that falls within the broad range or limitation (in the same claim) is considered indefinite, since the resulting claim does not clearly set forth the metes and bounds of the patent

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protection desired. See MPEP § 2173.05(c). Note the explanation given by the Board of Patent Appeals and Interferences in *Ex parte Wu*, 10 USPQ2d 2031, 2033 (Bd. Pat. App. & Inter. 1989), as to where broad language is followed by "such as" and then narrow language. The Board stated that this can render a claim indefinite by raising a question or doubt as to whether the feature introduced by such language is (a) merely exemplary of the remainder of the claim, and therefore not required, or (b) a required feature of the claims. Note also, for example, the decisions of *Ex parte Steigewald*, 131 USPQ 74 (Bd. App. 1961); *Ex parte Hall*, 83 USPQ 38 (Bd. App. 1948); and *Ex parte Hasche*, 86 USPQ 481 (Bd. App. 1949). In the present instance, claims 1 and 91 recites the broad recitation a silica to copper ratio of 1:0.34 to 1:5.15, and claim 1 also recites specific silica to copper ratio of 1:5.15, 1:0.78, 1:0.53, and 1:0.34, while claim 91 also recites a specific silica to copper ratio of 1:1, which are the narrower statements of the range/limitation. For purposes of examination it will be interpreted that the broader range of 1:0.34 to 1:5.15 was intended.

### Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

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11. The factual inquiries set forth in *Graham* v. *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

- Determining the scope and contents of the prior art.
- 2. Ascertaining the differences between the prior art and the claims at issue.
- 3. Resolving the level of ordinary skill in the pertinent art.
- Considering objective evidence present in the application indicating obviousness or nonobviousness.
- 12. Claims 1, 69-71 and 91 are rejected under 35 U.S.C. 103(a) as being unpatentable over Komatsu.
- 13. As to claims 1, Komatsu teaches an anti-microbial agent which has copper silicate in a silicate to copper ratio of 1:0.5 to 1:2 (See abstract CuO/SiO<sub>2</sub> mol ratio of 2:1), in which the silicate is prepared by adding a transition metal salt to a soluble alkali silicate under acidic conditions (Komatsu see abstract copper salt is added to an aqueous alkali silicate solution; the pH of 6.5 is in the acidic range see [0010]), a precipitate is formed (Komatsu a product is filtered, dried and perhaps ground which means that it is a solid precipitate see [0023], see also in the examples; a slurry is formed), and it is then washed and dried (Komatsu [0024]).
- Komatsu is different from claims 1 in that no explicit step of contacting the copper silicate with a one of the enumerated microbes of claim 1 is contemplated.
- 15. As to contacting the copper silicate with a microbe, Komatsu teaches that the compound is an antibacterial ([0042]), which may be used as in anti-fouling paints and coatings ([0027] and [0028]). So a person having ordinary skill in the art would know to coat surface of objects which come in contact with microbes with the compound if

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antibacterial properties were sought. Therefore, it would have been obvious to a person to coat or paint a surface with the anti-bacterial compound and thereafter allow the compound to come in contact with a microbe, thereby exploiting the antimicrobial properties of the copper silicate.

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- 16. As to claims 69-71, microbes (e.g. bacteria, cryptosporidium, apergillus sps, and viruses) of these types are routinely present in natural waters, and therefore it is implicit in the teaching of the reference that the anti-fouling copper silicate agent in Komatsu will contact these microbes. Alternatively, it would be obvious to use the copper silicate of Komatsu in instances when the ships hulls will come in contact with these enumerated microbes in order to prevent biofouling on the ship. (See Komatsu [0040] biocidal paint containing the copper silicate is applied to a ship).
- 17. As to claims 91, Komatsu teaches an anti-microbial agent which has copper silicate in a silicate to copper ratio of 1:0.5 to 1:2 (See abstract CuO/SiO<sub>2</sub> mol ratio of 2:1), in which the silicate is prepared by adding a transition metal salt to a soluble alkali silicate under acidic conditions (Komatsu see abstract copper salt is added to an aqueous alkali silicate solution; the pH of 6.5 through 8.5 is considered to be a neutral pH range, as it encompasses pH 7; see [0010]), a precipitate is formed (Komatsu a product is filtered, dried and perhaps ground which means that it is a solid precipitate see [0023], see also in the examples; a slurry is formed), and it is then washed and dried (Komatsu [0024]).
- 18. Komatsu is different from claims 91 in that no explicit step of contacting the copper silicate with a one of the enumerated microbes of claim 91 is contemplated.

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19. As to contacting the copper silicate with a microbe, Komatsu teaches that the compound is an antibacterial ([0042]), which may be used as in anti-fouling paints and coatings ([0027] and [0028]). So a person having ordinary skill in the art would know to coat surface of objects which come in contact with microbes with the compound if antibacterial properties were sought. Therefore, it would have been obvious to a person to coat or paint a surface with the anti-bacterial compound and thereafter allow the compound to come in contact with a microbe, thereby exploiting the antimicrobial properties of the copper silicate.

- Claims 1, 69-71, and 78 are rejected under 35 U.S.C. 103(a) as being unpatentable over Komatsu in view of Sheen and Samad.
- 21. As to claims 1 and 78, Komatsu teaches an anti-microbial agent which has copper silicate in a silicate to copper ratio of 1:0.5 to 1:2 (See abstract CuO/SiO<sub>2</sub> mol ratio of 2:1), in which the silicate is prepared by adding a transition metal salt to a soluble alkali silicate under acidic conditions (Komatsu see abstract copper salt is added to an aqueous alkali silicate solution; the pH of 6.5 is in the acidic range see [0010]), a precipitate is formed (Komatsu a product is filtered, dried and perhaps ground which means that it is a solid precipitate see [0023], see also in the examples; a slurry is formed), and it is then washed and dried (Komatsu [0024]).
- 22. Komatsu is different from claims 1 in that no explicit step of contacting the copper silicate with a one of the enumerated microbes of claim 1 is contemplated, and Komatsu does not mention the exact copper to silicate ratios of 1:5.15. 1:0.78. 1:0.53. or 1:0.34.

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23. As to contacting the copper silicate with a microbe, Komatsu teaches that the compound is an antibacterial ([0042]), which may be used as in anti-fouling paints and coatings ([0027] and [0028]). So a person having ordinary skill in the art would know to coat surface of objects which come in contact with microbes with the compound if antibacterial properties were sought. Therefore, it would have been obvious to a person to coat or paint a surface with the anti-bacterial compound and thereafter allow the compound to come in contact with a microbe, thereby exploiting the antimicrobial properties of the copper silicate.

- 24. As to providing one of the exact copper to silicate ratios, Samad teaches that the biocidal power of biocidal copper agents is controlled by the available metal (Samad col. 1 lines 39-41), and the water chemistry at large (Samad col. 1 lines 33-54). Komatsu also discusses varying the silica to copper ratio and performs efficacy tests to find suitable ratios (See Komatsu in the examples). So the amount of copper in the agent is a result effective variable. Therefore it would have been obvious to a person of ordinary skill in the art at the time of invention to optimizes the silica to copper ratio in the adjustable copper silicate compound of Komatsu. Discovery of an optimum value of a result effective variable in a known process is ordinarily within the skill in the art and would have been obvious, consult In re Boesch and Slaney (205 USPQ 215 (CCPA 1980)).
- 25. Also, although it is the position of the examiner that a pH of 6.5 constitutes acidic conditions as discussed above, Komatsu does not discuss more acidic conditions.
  Sheen teaches that the use of an acidic pH as low as pH 2 produces an amorphous

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insoluble copper silicate residue, while maintaining the solubility of both the silicic acid and copper silicate in solution during the reaction (See Sheen col. 1 lines 49-62 and col. 2 lines 5-15). Therefore, it would have been obvious to a person having ordinary skill in the art at the time of invention to maintain an acidic pH range in order to prevent the unnecessary precipitation of unwanted byproducts during reaction and to produce an insoluble acidic amorphous residue as the desired product.

- 26. As to claims 69- 71, microbes (e.g. bacteria, cryptosporidium, apergillus sps, and viruses) of these types are routinely present in natural waters, and therefore it is implicit in the teaching of the reference that the anti-fouling copper silicate agent in Komatsu will contact these microbes. Alternatively, it would be obvious to use the copper silicate of Komatsu in instances when the ships hulls will come in contact with these enumerated microbes in order to prevent biofouling on the ship. (See Komatsu [0040] biocidal paint containing the copper silicate is applied to a ship).
- Claims 91 and 92 are rejected under 35 U.S.C. 103(a) as being unpatentable over Komatsu in view of Samad.
- 28. As to claims 91, Komatsu teaches an anti-microbial agent which has copper silicate in a silicate to copper ratio of 1:0.5 to 1:2 (See abstract CuO/SiO<sub>2</sub> mol ratio of 2:1), in which the silicate is prepared by adding a transition metal salt to a soluble alkali silicate under acidic conditions (Komatsu see abstract copper salt is added to an aqueous alkali silicate solution; the pH of 6.5 through 8.5 is considered to be a neutral pH range, as it encompasses pH 7; see [0010]), a precipitate is formed

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(Komatsu a product is filtered, dried and perhaps ground which means that it is a solid precipitate see [0023], see also in the examples; a slurry is formed), and it is then washed and dried (Komatsu [0024]).

- 29. Komatsu is different from claims 1 in that no explicit step of contacting the copper silicate with a one of the enumerated microbes of claim 1 is contemplated, and Komatsu does not mention the exact copper to silicate ratios of 1:5.15, 1:0.78, 1:0.53, or 1:0.34.
- 30. As to contacting the copper silicate with a microbe, Komatsu teaches that the compound is an antibacterial ([0042]), which may be used as in anti-fouling paints and coatings ([0027] and [0028]). So a person having ordinary skill in the art would know to coat surface of objects which come in contact with microbes with the compound if antibacterial properties were sought. Therefore, it would have been obvious to a person to coat or paint a surface with the anti-bacterial compound and thereafter allow the compound to come in contact with a microbe, thereby exploiting the antimicrobial properties of the copper silicate.
- 31. As to providing one of the exact copper to silicate ratios, Samad teaches that the biocidal power of biocidal copper agents is controlled by the available metal (Samad col. 1 lines 39-41), and the water chemistry at large (Samad col. 1 lines 33-54). Komatsu also discusses varying the silica to copper ratio and performs efficacy tests to find suitable ratios (See Komatsu in the examples). So the amount of copper in the agent is a result effective variable. Therefore it would have been obvious to a person of ordinary skill in the art at the time of invention to optimizes the silica to copper ratio in the adjustable copper silicate compound of Komatsu. Discovery of an optimum value of

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a result effective variable in a known process is ordinarily within the skill in the art and would have been obvious, consult In re Boesch and Slaney (205 USPQ 215 (CCPA 1980)).

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- 32. As to claims 92, Komatsu teaches an anti-microbial agent which has copper silicate in a silicate to copper ratio of 1:0.5 to 1:2 (See abstract CuO/SiO<sub>2</sub> mol ratio of 2:1), in which the silicate is prepared by adding a transition metal salt to a soluble alkali silicate under acidic conditions (Komatsu see abstract copper salt is added to an aqueous alkali silicate solution; the pH of 6.5 through 8.5 is considered to be a neutral pH range, as it encompasses pH 7; see [0010]), a precipitate is formed (Komatsu a product is filtered, dried and perhaps ground which means that it is a solid precipitate see [0023], see also in the examples; a slurry is formed), and it is then washed and dried (Komatsu [0024]).
- 33. Komatsu is different from claims 1 in that no explicit step of contacting the copper silicate with a one of the enumerated microbes of claim 1 is contemplated, and Komatsu does not mention the exact copper to silicate ratios of 1:1.
- 34. As to contacting the copper silicate with a microbe, Komatsu teaches that the compound is an antibacterial ([0042]), which may be used as in anti-fouling paints and coatings ([0027] and [0028]). So a person having ordinary skill in the art would know to coat surface of objects which come in contact with microbes with the compound if antibacterial properties were sought. Therefore, it would have been obvious to a person to coat or paint a surface with the anti-bacterial compound and thereafter allow the

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compound to come in contact with a microbe, thereby exploiting the antimicrobial properties of the copper silicate.

35. As to providing one of the exact copper to silicate ratios, Samad teaches that the biocidal power of biocidal copper agents is controlled by the available metal (Samad col. 1 lines 39-41), and the water chemistry at large (Samad col. 1 lines 33-54). Komatsu also discusses varying the silica to copper ratio and performs efficacy tests to find suitable ratios (See Komatsu in the examples). So the amount of copper in the agent is a result effective variable. Therefore it would have been obvious to a person of ordinary skill in the art at the time of invention to optimizes the silica to copper ratio in the adjustable copper silicate compound of Komatsu. Discovery of an optimum value of a result effective variable in a known process is ordinarily within the skill in the art and would have been obvious, consult In re Boesch and Slaney (205 USPQ 215 (CCPA 1980)).

#### Response to Arguments

36. First, for the sake of clarity in this action, the examiner reiterates certain findings and statements made in the previous action (see pages 13 and 14 of the non-final rejection of 11-5-09), herein:

It is also noted that applicant has not traversed certain factual findings in the prior office actions. Namely, applicant has not traversed the factual assertion that the bacteria, protozoa, and fungi of claims 69-71 including bacteria, cryptosporidium and aspergillus are routinely present in natural waters. And it is therefore taken that these factual assertions are admitted. See MPEP 2144.03(C).

Regarding the electron spin resonance spectrometer readings and X-ray diffraction readings, these are intrinsic properties of the materials being produced. Moreover, once a product which is substantially similar to the product which is instantly being claimed is found, the burden shifts to applicant to show

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an <u>unobvious</u> difference. See MPEP 2113. So, in this case, although method claims are pending, applicant is attempting to base his argument for patentability on the electron spin resonance and X-ray diffraction characteristics of the product produced by the method. See Remarks pages 12 and 13. Therefore, applicant bears the burden of showing not just that these indicia are not specifically contemplated by the prior art, but that they represent an unobvious difference between the product produced found in the prior art and the product which is instantly produced.

- Applicant's arguments filed 5-5-10 have been fully considered but they are not persuasive.
- 38. Applicant argues at length that the pending claims cover technological scenarios and examples which are described in the specification on pages 15-19. In response, the examiner points out that the these examples and scenarios in the specification contain limitations which are not claimed. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).
- 39. Next, on page 20, Applicant appears to argue that the claims are patentable because applicant has restricted the claims to require the steps of making the copper silicate, which requires (i) adding a transition metal salt solution to a soluble alkali silicate solution under acidic conditions, (ii) forming a precipitate, and (iii) washing and drying the precipitate to obtain the transition metal silicate. In response, the examiner points out that these steps are shown in Komatsu in view of Sheen. Komatsu adds transition metal salt to a soluble alkali silicate solution, forms the precipitate and washes and dries it. Komatsu also provides for carrying out the reactions at a pH of 6.5 which is interpreted by the examiner to be under acidic conditions because the pH is less than 7.

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Nonetheless, sheen additionally teaches adjusting the pH between 2 and 6 to control the production of unwanted byproducts. Furthermore, applicant has only limited claims 1 and 78 to processing under acidic conditions. Claims 91 and 92 require neutral conditions for processing.

- 40. Applicant finally argues on page 20 that the prior art does not teach or suggest the concept of being able to directly influence the ability of cupric silicates to impart a particular type of activity by controlling the process by which the cupric silicate is formed. In response, although the claims require steps which might be intended to be attributable to such concept, the concept itself is not claimed. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).
- 41. Also, the fact that applicant has recognized another advantage which would flow naturally from following the suggestion of the prior art cannot be the basis for patentability when the differences would otherwise be obvious. See *Ex parte Obiaya*, 227 USPQ 58, 60 (Bd. Pat. App. & Inter. 1985).
- 42. The examiner strongly recommends that applicant call to schedule an interview so that issues in this case may be discussed before a response to this action is filed.

### Conclusion

 Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, THIS ACTION IS MADE FINAL. See MPEP Application/Control Number: 10/574,267

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§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lucas Stelling whose telephone number is (571)270-3725. The examiner can normally be reached on Monday through Thursday 12:00PM to 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Duane Smith can be reached on 571-272-1166. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Las 7-15-10

/Matthew O Savage/ Primary Examiner, Art Unit 1797